



# BEAT

P.O. BOX - 1797  
COLO. SPRINGS,  
COLORADO

1 FEBRUARY 1962

*Check on Relay for Door Prize*

ANNUAL AUCTION.....ANNUAL AUCTION.....ANNUAL AUCTION.....

The next meeting will be entirely devoted to the annual PPRAA AUCTION of any or all of the electronic goodies you might wish to dispose of. Here's your chance to clean out those items for which you no longer have any use for, and someone else might have an urgent need for just those items. A few items already collected by this writer include two receivers, transformers, tubes, and miscellaneous parts; you surely have something to add life to the auction that you no longer need, so let's dig it out!

Basically here are the rules of the auction:

1. We will auction anything electronic in nature.
2. The club retains 10% of the selling price of your item to defray costs of running the auction.
3. Selling will begin PROMPTLY at 8:00 p.m. Feb. 14.
4. The auction committee will be on duty beginning at 6:30 p.m. to begin checking in your items, so get them in early so they may be tagged and available for all to see ahead of time.
5. A door prize drawing will be held every half-hour with all tickets good at each drawing.
6. A ten minute coffee break will be held promptly at 9 p.m. with all activities stopping temporarily.
7. After all details of the auction are cleared, the treasurer will MAIL your checks for the items you sold. NO ONE will be paid for his articles at the time of the auction.
8. No minimum price for any item to be sold may be stipulated by you or the auctioneer.
9. Minimum bids will be advanced for each item at the rate of 10¢ for small items and 25¢ for something bigger.

The auctioneer will determine which rate will be used. This will speed up the process and avoid 1¢ and 5¢ bids.

So there you are! The committee hopes this is not too complex, but felt you would like to know all of the details. Speaking of details, Pony (W0YJO) has generously agreed to aid the committee in one area, that of providing us with item identification tags like those used last year. This proved to be a highly efficient method of giving you a receipt for your items, and providing the auctioneer and treasurer with the name of the owner. Many thanks, Pony!

All in all, we think you will have a ball at this shin-dig. Bring your friends, lots of cash (ahem), and scads of stuff to help clean out the shack. (This helps to keep the XYL happy.) Wednesday, February 14, 8:00 p.m. is the starting time for a fun-filled, rapid-fire evening. Be There!

#### EDITOR SPEAKS

Not quite sure if the end of the world would come or not, the editor waited just a bit before preparing an article for this month's 'Zero Beat'. After all if it had happened, we all could have had one fine Eyeball QSO in the land of 20 KW Transmitters, triple conversion Receivers etc. of which I am sure Heaven must be like. (Oh yes, QRM free QSO'S also.) Then there would have been no need for the monthly 'Zero Beat'. HI HI.....

At any rate we are all still here, and it is that time again, so here we go.

First of all we are having a PAPER problem. Yes, it seems our supply has been almost exhausted, and the only solution to this is to make the 'Zero Beat' a little smaller each month. Now I for one am not for this, as I made a promise to you readers that we would try and give you a paper that would take more than a few minutes to read each month. One alternative would be for the club to foot the bill for the paper each month. However this poses a bigger problem than not enough paper, as it brings up a small matter of not enough money. So the second alternative is to suggest that those who receive the 'Zero Beat' should contribute to the expense involved in so doing. Many who receive this paper are not club members, while many who are, have allowed their memberships to expire. Now we do not suggest that those who have departed this fine city long ago renew their memberships just to receive the 'Zero Beat' or that you must contribute a big hunk of money etc. We are just thrashing ideas around in our minds about decreasing the financial burden which your club must undertake each month. Remember that each issue mailed has a Three Cent Stamp attached, and this is also costly. Approxiametly 285 copies are mailed monthly and we cannot make up the deficit with what is taken in at each meeting on the door prizes and coffee when only twenty or thirty people attend. So the whole matter boils down to the fact that the PPRAA is not being given your full support, and that we need to get together and do something about this.

Make it a point to be at the monthly meetings, and bring with you an attitude that will make your presence enjoyable to everyone there. Consider very thoughtfully all of the suggestions and ideas from the floor, and don't put off a job or task which the club would benefit from, when you know that you could easily perform it. Sure, we are all busy, but there should be some time during the month that you could devote to helping your club, and by so doing benefit all those who belong. Don't let something that you dislike spoil the enjoyment of others. Bring up your grievances, and get something done about them. Make the monthly meetings something to look forward to and give them your full participation.

Before this next meeting (The Annual Auction) lets hear your ideas on what should be done about the expense involved for the monthly 'Zero Beat'. See you at the Auction and until next month,

VRV 73 ES DX, Mike KØEVP

### MINUTES

Those who attended the last meeting of the PPRAA were hosts to the following State Radio Officials. Howard Eldridge KØDCW, RACES and Charles (Chick) Cotterell WØSIN, Section Emergency Coordinator. The mission of the Civil Defense was discussed by Howard, and the importance of communications planning and drills was also discussed. Chick Cotterell spoke informally of the contributions that the PPRAA members could make to the community, both from the standpoint of local domestic emergency and national emergency associated with the Civil Defense activities. He encouraged the membership to concentrate its efforts behind the El Paso County Emergency Coordinator, Capt. E. L. Sanders, KØYGH.

Larry WØBEE made a suggestion that the Club have a Club station and that he had all the necessary space available at his home, in the basement. However Wally, KØWMD, mentioned that the basement of the club is available for this purpose. Lets hear your views on this matter at the March meeting.

Bill KØCEN suggested that the frequency 29.624 MC be used as the transmitter hunt frequency. All were in favor of this and the 'Hunt' committee, readily agreed.

Finally, Sonny KØYGH won a fine Soldering Iron as one of the door prizes.

### EMERGENCY COORDINATOR'S CORNER

The history of Amateur Radio, contained in Chapter 1, The Radio Amateur's Handbook, is well-worth reading occasionally and worth reflecting upon the contributions made by amateurs in the infancy of the hobby as compared to those being made today. we cannot be as popular as Marconi, Maxim, Sarnoff or DeForrest, but there are contributions to be made--small, but important never-the-less. How many world citizens owe there life, there good helth or just plain respect to a member of the amateur fraternity for some common-

place deed preformed in there behalf by an alert and willing amateur? Most individuals aspire to perform deeds which bring reward, either of material things or soley the satisfaction of having expended a helping hand to someone in need of assistance. These opportunities are available to each member of the PPRAA! Reward of material things may be prohibited by the regulations governing our hobby, but we can be sure of the more intangible rewards that come from a greatfull community.

Only recently, the Colorado Springs area has been subjected to rather severe winds, ice formation and other severe weather phenomenon. Telephone communications, in particular, are most affected by wind storms, ice storms and heavy snow damage. We, as qualified and efficient communicators, can serve our community and enhance the public confidence and trust in our amateur organization by volunteering our services. The publicity we gain may not compare to that garnered by our brother operators during Hurricane Donna, the West Virginia Floods, or Hurricane Carla, but you can be sure that our deeds will not go unnoticed. What does this point toward? Organization, Planning, Ideas, Drill!!!!

At this writing, there are eight full and two supporting members in the Amateur Radio Emergency Corps (AREC). With some 100 to 150 amateurs in the Pikes Peak Radio Amateurs Association, it would appear that a great number of our members would be interested in devoting some time to their community! There are two qualifications to become a member of the AREC. You must be a licensed amateur (Novice or higher) and have a desire to contribute in some way to a state of preparedness for communications assistance in time of emergency. The key is PREPAREDNESS, not your capability to contribute long periods of time to operation of radio stations, monitoring and so forth. You can help if -----

1. You can contribute ideas to a local communications plan.
2. Design or build low power gear, particularly handie-talkie units for VHF bands.
3. Assist in the organizations of members on your "preferred band of operation" into the emergency plan.
4. Act as an Assistant Emergency Coordinator.
5. Just be a volunteer ! There is something that each of us can do!

Without an attempt to be a "flag-waver", it appears appropriate to quote point six of the amateurs code: "An amateur is patriotic. His knowledge and his station are always ready for the service of his country or his community."

Thoughts "on the spur of the moment"

With the 'world travelers' that we have in the PPRAA, could we entice one or both of the newspapers in Colorado Springs to feature one or several of our members in a Sunday Edition? Maybe we could entice one of the local television stations to feature a member or the PPRAA during Amateur Radio Week. Applications for membership in the AREC are now available. Please see me at the club meeting or call me at ME 3 1028 or drop by my QTH at 1419 Holmes Drive. Decals will be available. 73 Sonny, KØYGH.

## GOSSIP

Harold Helman, Gil Hernandez, Larry Larson, John Felix and Wally have been working very hard on the weekly code classes at the YMCA. Judy and Tuppy, both took their Novice exams last week, and everyone expects the results to be favorable. New groups are being formed periodically, and the enrollment fee of \$5.00 charged by the YMCA entitles those who sign up to go on to their General Class exam if they wish.

Ronnie Morgan KØDZR expects to be on the bands very shortly from Woodland Park, with a Full Gallon. He is being very ably assisted by Bob WA6ZMZ/Ø, who has been helping Ronnie re-do "the surplus beast".

Joe KØGBS is back in town after a three months absence while he was attending an Electronics school.

Heard a roumer that Nipper WØCVG worked Ireland a few nights ago on 80 meters. Guess that thing that he calls an antenna really works!!!

Pete KØUDG and Sam KØUYC both went on a cruise as part of Navel Reserve Training this week. Sam went to the Great Lakes and Pete went to Los Angeles.

Ken KØAUT recently received orders for Clark AFB, Philippine Islands, however the addition of another stripe this month should make his new assignment enjoyable. Congratulations Ken, the whole gang will miss you.

Don WØDYU Woodland Park, up where the tall trees and big antennas grow, has been doing a fine business job on 75 phone with his Eico Xmtr.

Scotty KØTRM, field scout executive for the Colorado Springs Area, held a Radio Meeting before the Burlington Rotory Club, about Scouting and Amateur Radio. Understand that it was a smashing success. Scotty is on the air with a Globe Chief.

Woody KØHZV has been working 40ty lately, mainly because his 20ty meter antenna blew down. Also we heard that his Super Pro Receiver is on the blink. Suspect that the power supply is bad. Anyone have a nice choke lying around that he could use?

Earl WØSWN hasn't been too active this month, his only QSO was with a Novice KN7QQR from Moab Utah. Maybe he is too busy making out his income tax returns. HI HI...

We have been informed that the Palmer District Boy Scouts need some help in relation to their up-coming Camperie which will be held on the AFA grounds the weekend of May 4th 5th and 6th. Last year over 465 boys and adults attended, and this year even a bigger number are expected. They desire assistance from the PPRAA in the form of Mobile Units stationed at strategic points along the route to the campground. These units could provide directions to the campsite, and also report the traffic load to a fixed station at camp headquarters. Also the fixed station could provide the boys with a means to pass along messages to Colorado Springs, etc. This would be of the most assistance Saturday



afternoon and evening of the 5th. I am sure that by the time May rolls around we can fulfill there requests. Bring this subject up at the March meeting.

From Civil Defense: It has been reported that a small capsule about the size of a cigarette filter containing Cobalt 60 is missing. The amount of radiation (500 micro-curries) is not considered dangerous, however it could cause severe burns if carried for any length of time. Anyone having any knowledge or information as to the whereabouts of this item please contact Charles W. Willoughby, CD Director, Colo. Springs.

The Denver Post is now featuring a classified section for amateur radio equipment 41-B. Information on the cost of an ad may be obtained from the Denver Post directly.

The editor received two fine letters this month, from the following Hams who have left this area. George D. Beauchamp WØFQQ who is now stationed Tachikawa Japan. George is NCOIC of the Redistributing and Marketing Directorate. John N. Boland formally WØAX, now K1AA who is with the Raytheon Company, Wayland, Mass.

6 N 2

There were two band openings during January on six; one between 1420 and 1520 on the 9th into Arkansas and Tennessee and, 2035 to 2130 on the 13th into the State of Washington. All 5/9 plus signals.

We'd like to welcome WØFUE - the USAFA Prep School Club Station, along with operators K1BBT Ed, and K6VOS Rics to the 50 MC band. KØYAW Kit is the spark behind this activity.

WØBBU Dick, in Pueblo has revamped his former channel two TV antenna for six and is now putting a plus-plus signal into the Colorado Springs area.

Experience is beginning to tell on six- the activity is well up both in the Springs and in Pueblo, with a concentration of effort being put into antennas. It's suprising to see the effect obtained with a good antenna attached to a Heath sixer.

The Springs gang is certainly not active on two. The Pueblo gang far exceeds Colorado Springs in two meter activity. How about it, fellows-- no QRM either!!!

Our regular Colorado Springs net on 146.25 Mc now nets but two stations at 1900 on Tuesdays-WNØAJC Jim and WØBAG Ray. We're looking for more activity.

KØVCR Kent's mobile Heath Twoer is temporarily out of business-seems that the -25 degree temperatures didn't agree with the transistors in the mobile power supply. Hope this can be fixed soon.

KØEZQ Ed in La Junta has been heard in both Colorado Springs and Pueblo. Ed is using a fixed frequency receiver and hasn't been able to tune the gang in so far.

See you on six and two-----73, Ray WØBAG

8:00 P.M. FEB 14 AT THE YMCA YOUTH CENTER .. BEST AUCTION YET!

## WANTED

Manual for the APX 6 Transponder, or any information concerning this equipment. Call Harold Tyler at MU 5-9001.

Tubes: lea. type 5686, and lea. 6AU8A, Mike KØEVP ME 5-5723.

## FOR SALE

Johnson Viking Ranger Transmitter-Factory Wired-Excellent Shape-185.00. Hammarlund HQ-145 Receiver-\$170.00. Johnson Kilowatt Matchbox and Standing Wave Bridge-\$130.00. Homebrew 500 Watt 813 Amplifier complete with modulation deck, power supplies, and spare parts, any reasonable offer.. Equipment may be seen at 2319 Oriole Ave. evenings or weekends by calling ME 4-6440.

DX-35 Transmitter, Very good condition. \$40.00, Call Dayton Sigler WØZKM at ME 3-4495.

Hy Gain 10,15 & 20 meter beam, 2 Element rated 500 watts AM, Full Gallon SSB, plus 50 Ft. of RG-8U Coax, all for \$50.00. Also have home brew mobile transmitter rated at 20 watts, for forty meters as well as mobile receiver for 40 & 80 meters plus power supply for 12 volts, that will power both the transmitter and receiver. What am I offered? Call Orvin Farmer at ME 4-5165.

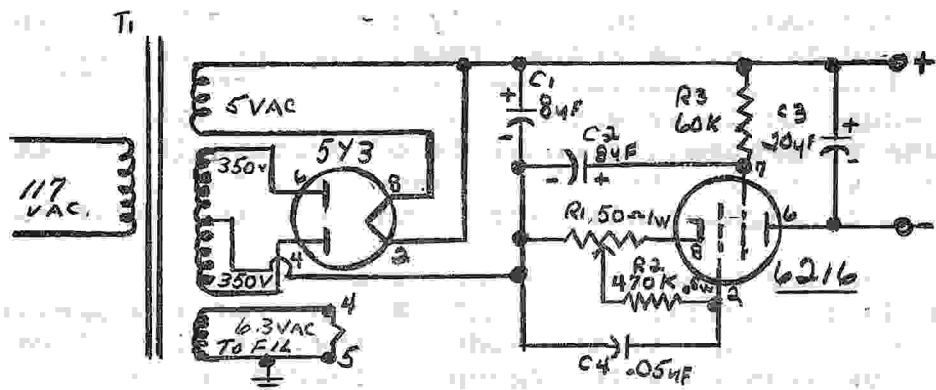
## SCHEMATIC OF THE MONTH

This month's schematic is submitted by your editor. It is taken from an article by: William I. Orr, W6SAI, CQ, June 1954.

If you are wondering where that next Choke for your small power supply will come from, forget it. Here is how you can do just as good a job of filtering without one. Use A Tube!!

The Electronic Filter Choke is the CBS Type 6216, schematic follows.

"Using a vacuum tube to replace a filter choke is a relatively new idea". So said Bill Orr in 54. But I'll bet not too many of you Hams have ever tried it. So here is the picture.



\* NOTE POLARITY OF C1, C2.

T1. 350-0-350 VOLTS, 100 MA  
CHICAGO, PV-120 OR P5C-105

C1, C2 84Fd C3, 204Fd

C4. 0.054Fd, R1, 50Ω,

WIREWOUND, 1 WATT

R2, 470K, 1/2 WATT

R3, 60K, 1 WATT

The 6216 is placed in series with the negative lead of the power supply and acts as a series resistor of some 300 to 500 ohms. The a-c fluctuations present in the output of the 5Y3 full wave rectifier tube are impressed upon the grid of the 6216 tube through coupling capacitor C4. The internal resistance of the 6216 varies in such a way as to oppose the a-c fluctuations, and to smooth the current flowing through it. Using the circuit shown, the r.m.s. ripple voltage in the output is only 210 millivolts. Potentiometer R1 should be adjusted for minimum a-c ripple

voltage across the output terminals of the power supply. The action of the 6216 tube, as compared to a 12 Henry @ 100 milliamp filter choke in this ckt. are very similar. However the voltage drop across the 6216 is slightly greater than the voltage drop across the choke, but the ripple voltage is slightly less. Maximum current passed by one 6216 in this ckt. is 100 milliamperes. Just look at the possibilities which you have in this little jem!

### NEW IDEAS

More on Hidden Transmitter Hunting; By Bob, WA6ZMZ/Ø..

This month's contribution deals with the actual hunting apparatus. Presented are three simple forms of hunting loops. They are (1) a simple uni-directional loop, (2) a more complex uni-directional & bi-directional loop, and (3) a straight bi-directional loop. While none of these loops are particularly hard to build, a little care and good construction will pay off in the long run.

Loop number (1) consists of three items. They are: 1, the loop itself, made out of  $\frac{1}{4}$ " copper gas line; 2, some sort of handle, and 3, the co-ax used to feed the loop to the receiver. The diagram is fairly self-explanatory except for the fact that the length of co-ax is fairly critical, with 54" a typical value. The process used to determine the correct length is to make the co-ax about one foot longer than necessary and then to prune the co-ax 1 inch at a time until maximum signal transfer is accomplished.

Loop number 2, is exactly like loop number 1 except that two turns of copper line is used and there is a small tuning capacitor (50 mmf) in the middle of the loops. The tuning-up procedure is exactly the same as above except that after the co-ax is pruned, the capacitor is adjusted for the desired receiving pattern. If the capacitor is tuned exactly so that the loop will be resonant at the received frequency, the loop will be bi-directional. If the loop is slightly off frequency, it will become uni-directional. The bi-directional loop has much sharper receiving lobes.

Loop number 3 is a little smaller and entirely different in principal. The center conductor of the co-ax is the actual receiving antenna while the shield braid is an electrostatic shield. The pick-up pattern is bi-directional and is more immune to interference and 'ghosts' signals than the other two. The tune-up procedure consists of pruning the co-ax.

For actual hunting an S-meter is strongly advised, the one in the Handbook is excellent., also if night hunts ever occur, a meter light is invaluable.

Some people like to drive and hunt at the same time while others prefer to have a passenger do the actual "looping". Which ever you prefer to do, make sure the loop is tuned-up for the side of the car it will be used on, using the mobile apparatus when tuning-up of course. Also a little bit of practice before the first hunt is advisable. 73 Bo Bo..

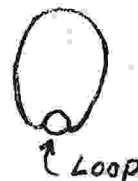
Loop # 1

Pick-up Pattern

The loop is  $\frac{1}{4}$ " copper gas pipe.

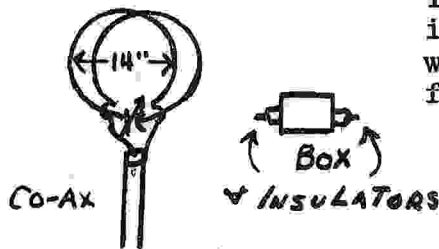
Co-ax is RG-58/U.

Handle is up to the builder.





# Loop # 2



The 50mmf Variable Capacitor is placed in a shielded, weather proof box, using feed-thru insulators.

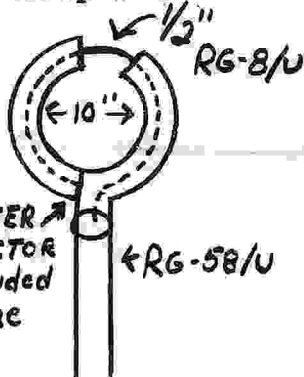
# Pick-up Pattern

-Bi-D

---UNI-D

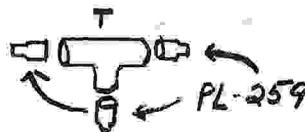


# Loop # 3



The Co-ax shield is broken and striped away for a length of 1/2 inch at the top. The connector at the bottom is a co-ax T and three PL-259 connectors.

# Pick-up Pattern



NEXT MEETING



The next meeting of the PPRAA will be held at the YMCA Youth Center at the corner of Weber & Bijou, Wednesday February 14th at 8:00 p.m.

This is the Annual Auction, and need I say more.... See you there!!

# PPRAA OFFICERS

President: John Wald, K4ILF/Ø, ME 5-5981

Secretary: Bob Roberts, K9MHE/Ø,  
ME 3-6644-Ext.3865

Treasurer: Robert Card, WØULZ, ME 5-0885

PPRAA  
P.O. BOX - 1797  
COLO. SPRINGS  
COLORADO



JOHN WALD  
K4ILF  
939 SKYWAY BLVD.  
COLORADO SPRINGS, COLO.

FORM 3547 REQUESTED